IOWA STATE UNIVERSITY
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Volume 6 | Issue 2 Article 6

1943

Retrospection

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Retrospection

Dean Murray presents history of oldest state veterinary school

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THE dictionary definition of retrospection is "looking backward on things past." Since young men look forward only, it becomes the prerogative of old men to engage in retrospection. To them it is usually calling past events to remembrance. These events generally are of no interest to youth, yet we of ancient vintage persist in our assumed privilege of thinking of the past and forcing youth to listen to the story.

The story I shall offer you tonight will be brief and, I assume, some interest to you in that it is of the school where Destiny has placed you.

Establishment of School

Provision for its establishment was by act of the Legislature, signed by Governor Lowe, March 22, 1858, providing for the establishment of a State Agricultural College and Farm to include veterinary studies among other courses to be taught. It was 13 years later when President Welsh reported that, "for additional instruction seniors in agriculture will need a professor of practical agriculture who, besides other important duties, will give lectures on comparative anatomy, physiology, and veterinary science." Veterinary subjects as taught at that time were offered in the second semester of the senior year in agriculture. The first class to graduate from Iowa State College was the one of 1872. It was also the first to receive veterinary instruction, but there were no veterinary graduates. George C. Faville was the first veterinary graduate, in 1879.

The veterinary staff of that period consisted of 1 man, Doctor H. J. Detmers, an eccentric but well-educated German, who came to this country from one of the veterinary schools of Germany. He transferred to Ohio State University after a short period of service here. There then ensued a lapse of 5 years with no veterinarian on the faculty.

Milliken Stalker, a graduate of Iowa State College in Agriculture in the class of 1873, became a professor of agriculture here that same year. Sensing the need for veterinary instruction, he took Leave of Absence in 1876 to attend lectures in veterinary science at the New York Veterinary College and Toronto Veterinary College, and that year was appointed Professor of Agriculture and Veterinary Science here, an appropriation of $50 being made for the Department of Veterinary Science. In 1878 Doctor Stalker began plans for the establishment of a veterinary school, and on May 3, 1879 the Board of Trustees ordered that "the course of the Veterinary School be extended 1 year." That, then, is the birthday of the present Veterinary Division, and marks the establishment of the first veterinary school in the west, and makes ours the oldest state veterinary college in existence. The veterinary catalog of 1880 lists Doctor Stalker as the first Dean of the Division.

First Veterinary Building

At the time of organization of the veterinary school, no provision for housing it had been made. This problem was solved by giving it quarters in President Welch's old home, which he had vacated for a new home he had just built. This building was later known as South Hall, still later, as Music Hall. It stood on the

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ground just south of the road in front of Memorial Union, on the east side of the road leading to the parking place east of the Union. The only laboratory was a small bedroom with one window. For large classes the front parlor was available when not in use by Professor Bessey's classes in botany.

First Equipment

The main equipment consisted of 4 student microscopes and a larger one personally owned by Doctor Fairchild, the first pathologist. Its highest power of magnification was a 1/6 objective. Material for study came from local butcher shops. With a few staining fluids and reagents, it was possible to study blood, muscles, and connective tissue.

The clinical phase of the work was conducted in a small barn located in the southwest corner of what is now known as the polo field. It was an exceedingly poor building, only a barn at best. This barn may have been the one referred to in the proceedings of the Trustees' meeting of March, 1882, when the Board refused to pay Doctor Stalker $225.61 for a barn he had purchased for the use of the Veterinary School. Later, Doctor Stalker offered to give the College this barn, and $40 to boot, in exchange for forty acres of land in Boone County, which offer was accepted. The pay of the first veterinary professor was small indeed, but he was permitted to charge students a moderate fee for his lectures. In 1880, this plan having proved unsatisfactory, the Trustees voted him a salary of $400 per year, beginning March 1, 1880.

Curriculum

The curriculum of 1879 covered two years of work from March to November, with two weeks vacation in July. The entrance requirements were as follows: Candidates for admission must be 16 years of age; for graduation, 18. An entrance examination in reading, spelling, geography, grammar, and arithmetic was required, and for graduation the candidate must have attained a standing of 75 in all subjects taken, and presented a thesis upon some subject approved by the faculty.

Students completing only the 2 years of required veterinary work were given the degree Bachelor of Veterinary Medicine. Those who, in addition, graduated from any of the courses in agriculture with the B. S. degree, were entitled to the D.V.M. degree.

The pressing need for more commodious housing resulted in the Trustees appropriating $5752 for a building for veterinary, agriculture, and botany. This building was known as North Hall, located northeast of the present Beardshear Hall, near the present site of Botany Hall. Doctor Stalker reported the clinic had grown to such extent that increased facilities were imperative for that phase of the work. He stated that the clinic for the past year had about "50 boarding cases and 300 others presented at daily clinics."

New Buildings Erected

The year 1885 was the banner year for buildings. Two were constructed, one for a hospital, a brick, two-story structure, 40 x 50 feet in size, said to be "the best infirmary in the United States," on the present site of the Memorial Union; the other for classrooms and laboratories situated about 15 rods northwest of the hospital.

Doctor John H. McNeil, a Pennsylvania graduate who joined the faculty in 1900, became Dean in 1903. He served from April 7, 1903, until October, 1908, when he transferred to Ohio State as professor of surgery. Under his directorship steady progress was made. The teaching staff was enlarged, but adequate financial support for faculty and buildings was not provided. Doctor McNeil asked for an appropriation of $150,000 for the construction of a group of buildings, but it was not until 1910, under the Deanship of Doctor C. H. Stange, that legislative authorization for buildings was obtained. The sum of $150,000 was approved, and directions issued to draw up plans for the group.

Doctor Stange had been appointed Dean in February, 1909, replacing Doctor McNeil. He served in this capacity for 27

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that contagious and infectious diseases be reported to the Chief of the Division of Animal Industry.

Quarantine shall mean perfect isolation of all diseased or suspected animals as well as the exclusion of other animals from yards, stable enclosures, or grounds where suspected or diseased animals are or have been kept. State sanitary officials are reluctant to introduce spore vaccines unless they are essential in the control of the disease.

Iowa regulation No. 22 states that all carcasses of anthrax-infected animals must be burned within 24 hours intact without removal of the hide. All contaminated flooring, mangers, feed racks, watering troughs, buckets, litter, soil and miscellaneous utensils must be burned if possible. In case equipment such as flooring, mangers, and feed racks that have been contaminated are constructed of metal, cement, or fireproof material, they shall be disinfected thoroughly with Cresolis Compound, U.S.P., or any reliable disinfectant recommended by the Bureau of Animal Industry, Chief of the Division of Animal Industry, or a regularly qualified veterinarian.

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years, until his death on April 26, 1936. During his tenure the Veterinary Quadrangle was completed and occupied in January, 1912. In 1913, the State Biological Laboratory for the production of anti-hog-cholera serum was established. The plant stood on the present site of the Stange Memorial Clinic. It continued operation until 1926, when it was torn down and the suitable salvaged material was used in the construction of the Veterinary Research Laboratory on Beech Avenue, south of the campus.

During the last two years of his life Dean Stange completed plans for the Clinic Building. Bids were taken by the Board of Education, but the cost exceeded the estimate, and the plans had to be revised. Construction was completed in 1938, and the building was put to use on January 3, 1939.

Perhaps the comparison of clinical facilities and the number of clinic cases handled per annum in 1942 with those of 60 years ago best measures the growth of the Institution. As stated before, Doctor Stalker's report of 60 years ago indicated a small barn in poor condition and practically no equipment with 50 boarding cases and 300 others presented to the clinic in 1 year. In 1942 there is a building which cost $180,000, with equipment valued at $28,000, to which were presented 8958 cases, with an additional 15,157 served by ambulatory clinic.

Educational Policy

Facilities alone do not measure the efficiency of a school. Unless the educational policy of an Institution is sound, its success is limited and its reputation suffers. The policy of the Iowa State Veterinary College has always been for high standards, and in many instances it has been first to adopt programs looking toward a higher standard of education.

Beginning with a program which involved only 1 year of professional work in the curriculum and with only meager entrance requirements, it soon increased the time to 2 years and made more rigid the qualifications for admission. Nine years after inauguration of the veterinary curriculum (1887), the required course was lengthened to 3 years. This was the first three-year course offered in America. In 1902 Dean McNeil asked the Board of Trustees for authorization to increase the curriculum to 4 years, and in 1903 the first four-year course to be offered in America was adopted. In 1911 Iowa State became the first school in America to require matriculants to be graduates of accredited high schools. The final stiffening of requirements for admission came in 1931, when again Iowa State was the first American school to require a minimum of 1 year of collegiate work for admission. As in all previous actions of the kind, there was considerable temerity on the part of other veterinary colleges to adopt the programs in effect here, but eventually uniform requirements were adopted by all.

As to the future of the school, there can be no doubt that advances and improvements in its conduct will continue to be made. Certain ideas are at present under consideration, and it is certain that after the war changes will necessarily be made to meet the demands of a new era.

Presented by Dean Charles Murray, July 14, 1943, before the members of the Junior Chapter of the American Veterinary Medical Association, Iowa State College.

PROBLEMS OF CALF FEEDING

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the proteins by pepsin and hydrochloric acid. A flooding of the small intestine with these undigested proteins may easily throw calves off-feed. Some calves with stomachs functioning perfectly do very well on milk fed by the pail method, but other calves need to be babied. Calves that digest their food inefficiently partly because of a hyposecretion of the digestive juices are usually weak, and naturally, milk which is so dilute that it cannot be concentrated by coagulation of the casein in the stomach is more difficult for them to digest than undiluted milk. This also helps to explain why milk should never be diluted when fed to young calves except under extraordinary conditions. For clearness, I'll mention one "extraordinary" condition. Some calves seem to do better on milk from the high fat producing breeds if it is diluted one-fifth. This is probably because the milk is too rich in solids and forms a very tough curd in the stomach. Milk containing 5 per cent fat contains 40 per cent more calories than milk containing 3 per cent fat, and should be fed accordingly—that is, in smaller amounts.

Linseed "tea" is much better than water for diluting milk. Linseed "tea" is made by boiling linseed meal vigorously for an hour or so, and then straining off the liquid portion. A sugar sack makes an excellent strainer for this purpose. The "tea" should be thick enough to form a semi-jell when cold. This gelatinous material reduces the toughness of the milk curd and at the same time seems to prevent scouring. This action is probably due to the hydrophilic properties of the glycoproteins. Lime water is probably the next best diluent for rich milk.

A word should be said about the use of nipple pails. Nipple pails cause the calf to drink slowly, mimicking somewhat the conditions obtained during nursing. Of course, if one is not careful, the milk in the bottom of the nipple pail may be almost cold before the calf swallows it. One of the greatest objections to nipple pails is that they require longer to feed the calves than open pails, and the pails are difficult to clean.

Now, a word about gruel feeds. The gruel enters the rumen in a fine state of suspension. In that no digestive juices are present in the rumen of the young calf and no bacterial flora has developed in the young calf, the gruel must be washed over into the true stomach before it can be attacked by enzymes. The results are disappointing. Much of the nutrient material is enclosed in a cellulose membrane and cannot be attacked by the digestive juices. Before long it escapes into the intestine where the same difficulty occurs again. These high fiber feeds when eaten in excessive amounts soon irritate the intestinal mucosa and unless one is a careful feeder, may result in scouring. Pelleted feeds are ingested more slowly but otherwise behave as a gruel feed. As far as the writer is aware, the pellets disintegrate in from 5 to 15 minutes after entering the rumen.

Rumen Development

As soon as the calf begins to eat hay regularly, the farmer can be sure that the rumen is developing rapidly and that a more or less permanent bacterial flora has become established. This is especially true of the nursing calf whose liquid food, for the most part, by-passes the fore-stomachs. Although calves grow more rapidly if fed liberally on milk for six months, one can begin substituting plant foods, such as calf starters, for milk when the calf begins to show a relish for some kind of roughage. The calf is usually two or three weeks of age when it begins to eat hay. As soon as the calf will eat enough hay